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[54]	METHOD AND APPARATUS FOR
	AUTOMATIC INSERTION OF A
	TELEVISION SIGNAL FROM A REMOTE
	SOURCE

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[56] References Cited

U.S. PATENT DOCUMENTS

3,696,297	10/1972	Otero .
4,331,974	5/1982	Cogswell et al
4,532,547	7/1985	Bennett .
4,538,174	8/1985	Gargini et al
4,547,804	10/1985	Greenberg .
4,575,750	3/1986	Callahan .
4,625,235	11/1986	Watson .
4,638,181	1/1987	Deiss .
4,638,359	1/1987	Watson .
4,639,779	1/1987	Greenberg .
4,647,964	3/1987	Weinblatt .
4,656,629	4/1987	Kondoh et al
4,724,491	2/1988	Lambert .
4,733,301	3/1988	Wright, Jr
4,814,883	3/1989	Perine et al

5,029,232 7/1991 Nall . 5,099,319 3/1992 Esch et al. . 5,130,792 7/1992 Tindell et al. . 5,200,825 4/1993 Perine .

FOREIGN PATENT DOCUMENTS

0187961	7/1986	European Pat. Off
0355697	2/1990	European Pat. Off
0424648	5/1991	European Pat. Off
0482801	4/1992	European Pat. Off H04N 1/00
0536628	4/1993	European Pat. Off
9221206	11/1992	WIPO .

OTHER PUBLICATIONS

Arvis 7000 and 7742 Brochures. Multichannel News, Feb. 17, 1992 "Adstar and Nustar Take Vows".

S. Schley, Cable Avails, "Spot Cable", Apr. 1993. Abstract "CM Transmission Device" NEC Corp. 7609 Sat-A-Dat Decoder/Controller, Group W Bro-

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ABSTRACT

A system is provided for inserting selected commercials from a remote source via satellite into pre-cued cable network commercial breaks at targeted regional groupings of local cable headend operators without storage of the commercials at each headend. By sequencing the avails used for insertion among the groupings of headends, by creating plural levels of simultaneity, and by using compression/decompression techniques, a highly efficient use of the satellite per each transponder channel is achieved despite overlap in breaks as between networks; while, at the same time, allowing sufficient time during each break for the local headend operator to insert his own local ads if desired, and to use as well, if desired, the decompression capabilities of the system without the need for the headend to invest in its own.

31 Claims, 7 Drawing Sheets

